

Supplementary Table S1. The representative RVA strains used for VP7 genotyping shown in Figure 1.

| Strain name | Genotypes | | | | | | | | | | | Remarks | Acc. No. of VP7 |
|--------------------------------------|-----------|------|-----|-----|-----|-----|------|------|------|------|------|----------------------------|--------------------|
| | VP7 | VP4 | VP6 | VP1 | VP2 | VP3 | NSP1 | NSP2 | NSP3 | NSP4 | NSP5 | | |
| RVA/Human-wt/JPN/SP15-09/2015/G1P[8] | G1 | P[8] | I1 | R1 | C1 | M1 | A1 | N1 | N1 | E1 | H1 | G1 lineage 1 (Wa-like) | LC311226 |
| RVA/Human-wt/JPN/NT036/2013/G1P[8] | G1 | P[8] | I1 | R1 | C1 | M1 | A1 | N1 | N1 | E1 | H1 | G1 lineage 2 (Wa-like) | LC172271 |
| RVA/Human-wt/JPN/SP15-06/2015/G1P[8] | G1 | P[8] | I2 | R2 | C2 | M2 | A2 | N2 | T2 | E2 | H2 | G1 lineage 1 (DS-1-like) | LC311225 |
| RVA/Human-wt/JPN/To16-04/2016/G2P[4] | G2 | P[4] | I2 | R2 | C2 | M2 | A2 | N2 | T2 | E2 | H2 | | LC311229 |
| RVA/Human-wt/JPN/KN105/2013/G3P[8] | G3 | P[8] | I1 | R1 | C1 | M1 | A1 | N1 | N1 | E1 | H1 | Human typical G3 (Wa-like) | LC172317 |
| RVA/Human-wt/JPN/To16-01/2016/G3P[8] | G3 | P[8] | I2 | R2 | C2 | M2 | A2 | N2 | N2 | E2 | H2 | Equine-like G3 (DS-1-like) | LC311227 |
| RVA/Human-wt/JPN/OH279/2002/G4P[8] | G4 | P[8] | I1 | R1 | C1 | M1 | A1 | N1 | N1 | E1 | H1 | | LC311231 |
| RVA/Human-wt/JPN/TA15-07/2015/G8P[8] | G8 | P[8] | I2 | R2 | C2 | M2 | A2 | N2 | N2 | E2 | H2 | | LC311230 |
| RVA/Human-wt/JPN/To14-25/2014/G9P[8] | G9 | P[8] | I1 | R1 | C1 | M1 | A1 | N1 | N1 | E1 | H1 | G9 lineage3 | LC105292 |
| RVA/Human-wt/JPN/To16-02/2016/G9P[8] | G9 | P[8] | I1 | R1 | C1 | M1 | A1 | N1 | N1 | E1 | H1 | G9 lineage6 | LC311228 |
| RVA/Human-wt/JPN/NS17-5/2017/G12P[8] | G12 | P[8] | I1 | R1 | C1 | M1 | A1 | N1 | T1 | E1 | H1 | | LC426752 |